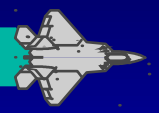
AFSOM Development Update

Integrated Command and Control System Program Office

AFSOM UWG
25-27 Apr 00

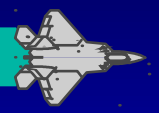
AFSOM Enhancements for 2000



- **Shared memory data transfer schema improves intra-model communications**
- **Redesigned TBM trajectory profiles**
- **Enhanced DIS interface to virtual simulators (improved object motion and increased performance)**
- **Interface to Theater Battle Management Corps Systems (TBMCS) under development**

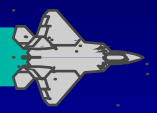
AFSOM Activities Update

AFSOM UWG



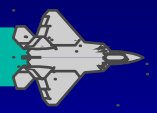
- **Successfully completed RS Tech Test II in Feb @ JTASC.**
- **Successfully completed JEFX Spiral 1 @ CUBE in March.**
- **Trained HIANG in March**
- **Successfully complete RSO&I**

CT Results

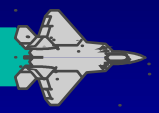


- 18 total PR’s
  - 2 moved to “enhancement”
  - 10 closed on site
  - 6 brought home
- Since CT
  - ? Of the remaining 6 closed

Work in Progress

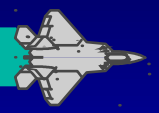


AFSOM Enhancements for 2001



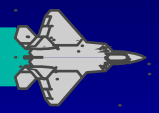
- **2101--AWSIM DIS I/F**
  - Expansion of JEFX and Roving Sands requirements
  - Emissions PDU
  - (Variable) 1 second updates - TBMs first
- **2418--ATI**
  - Covers MPW and JEFX 00 TBMCS requirements
  - Mission package support
  - Mission Planner Workstation enhancements
- **4332 Mission Rehearsal, Analysis, and Enhanced AAR**
  - Supports expansion of the AWSIM Analysis Tool Kit data collection

AFSOM Enhancements for 2001



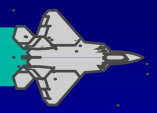
- **4331 Manual Read Command Inconsistent**
  - Dynamic read-in of scenario and adaptation files is different, confusing
- **4283 Max Range on Bomb's Not Used by AWSIM**
  - Provides realistic "lofting" of weapons from appropriate distances from targets
- **4220 CATT/DICE I/F**
  - Deaggregates AWSIM airbases for DIS interactions
- **4168 Better support of forward deployment**

AFSOM Dependencies



AWSIM Version	GDS Version	ATI Version	ACI Version
2.2.2.13	1.9.0	.85alpha	2.1.3
2.2.2.14	1.9.3	.90alpha	

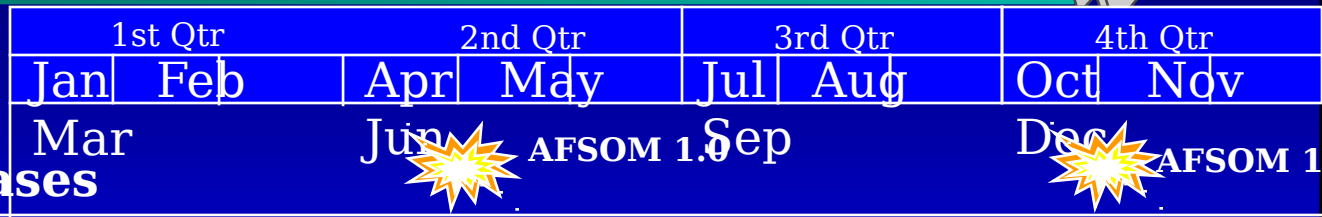
AFSOM 1.0



- **To eliminate interdependencies ESC proposes releasing AFSOM as a package.**
  - **Includes AWSIM, GDS (GIAC), and ATI**
- **AFSOM releases will follow AFAMS recommended release schedule**
  - **Post CT release for use at Prairie Warrior (AFSOM 1.0)**
  - **Post EFX release**

AFSOM Maintenance Enhancement Plan for 2000

AFSOM UWG

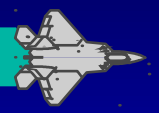


Planned AFSOM Releases

- ~~JTC 2000 Baseline (AFSOM 1.0)~~
- ~~2101--AWSIM DIS I/F*~~
- ~~2418--ATI*~~
- ~~4332 Mission Rehearsal~~
- ~~4331 Manual Read Command~~
- ~~4283 Max Range on Bomb's~~
- ~~4220 CATT/DICE I/F~~
- 4168 Better support of TPFDD
- Other AWSIM "Targets of Opportunity"
- GIAC/GDS Support to AFSOM v1.1
- JEFX Baseline 2000 (AFSOM 1.1)

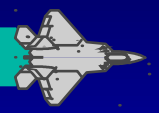
* Continuous from previous maintenance cycle

Database Issues



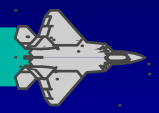
- **Some navy aircraft were not built in AWSIM2. This probably caused F14s, S3s etc to not be mapped correctly in AWSIM2 during UFL99A. Fixed in CT2000 and updated UFL99A databases.**
- **GAU8 and GAU12 weapons were not mapped correctly. This probable result was that A10s, OA10s and AV8Bs were ineffective with their cannon against CBS armor. T30MM and T25MM are the correct enumerations to use for GAU8 and GAU12 rounds, not 30MM or 25MM. Fixed in CT2000 and updated UFL99A databases.**
- **Found a lot of standoff weapons still built as bombs. Use of these weapons as built would have caused the attacking flight to be exposed to target area defenses at a hgher than normal rate. Fixed in CT2000 and updated UFL99A databases.**

Database Issues (con't 1)



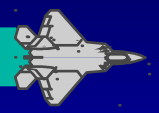
- **PHALANX and VULCAN guns were missing. Interaction with these weapons most likely went to a default. Fixed in CT2000 and updated UFL99A databases.**
- **Saw a lot of longtrack radars on blue bases. Removed in CT2000 and updated UFL99A databases.**
- **Found a lot of AIRMS radars in the database. AIRMS is obsolete and should be changed to either AIR, AIRCM, or SURF. Partially fixed in CT2000 and updated UFL99A databases.**
- **Found a lot of aircraft with ARAD1 radars. These are no longer needed since AWSIM2 visual detections work correctly. Removed in CT2000 and updated UFL99A databases.**

Database Issues (con't 2)



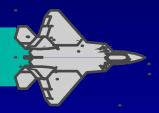
- **Found many bases with RECCE bombs. These are no longer required since AWSIM2 supports the RECONN command. Also, ATTACK no longer requires a bomb or ASM to execute, but RECONN is the preferred command for tactical recce missions. Removed in CT2000 and updated UFL99A databases.**
- **Noticed the following problems with PW99 (which I did not change at all) while I was building CT2000 db:**
- **Noticed several cases of follow on SAM systems with a lower Pk than older similar systems. Partially fixed in CT2000.**
- **Noticed one SAM weapon with a 0 Pk in band 2. This would be highly unlikely, and was probably a typo. Fixed in CT2000.**

Database Issues (con't 3)



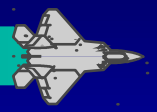
- **Notice many SAM weapons with the same Pk throughout the 5 altitude bands. Normally, lower and upper bands have lower Pks than middle bands to compensate for the lack of terrain (lower bands) and reduced aerodynamic/propulsion capabilities (upper bands). Partially fixed in CT2000.**
- **B2A GEM and SEM were far too low. The result of this would be less than expected damage when a B2 dropped bombs/ASMs (GEM), or fired cruise missiles (SEM). B2A UFL numbers for GEM and SEM were used for CT2000.**

COTS Product Upgrades



- **Potential upgrades include:**
  - **Solaris: 2.7**
  - **Oracle: 8i or 8.1.6 replacing 8.0.5**
  - **“Panther” replacing JAM 7.35 (Scenario Generation GUI)**
- **Centers need to ensure agreements cover software upgrades**

AWSIM EFX 00 Schedule



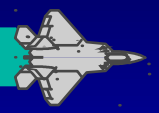
Major Events

J EFX00 Design Review

◆ M&S Technical Interchange Mtg	8-10 Feb 00
◆ J EFX 00 Design Review	15-17 Feb 00
◆ Spiral 1 (Hanscom AFB, MA)	15-22 Mar 00
◆ M&S Integration Test	22-26 May 00
◆ Spiral 2	31 May-9 Jun 00
◆ M&S Technical Interchange Mtg	27-29 Jun 00
◆ M&S Integration Test	10-14 Jul 00
◆ System Wring-out	24-28 Jul 00
◆ Spiral 3	31 Jul-11 Aug 00
◆ M&S Integration Test	21-24 Aug 00
◆ Experiment Execution	25 Aug-15 Sep 00
– System Training:	25-30 Aug 00
– Dynamic Vignettes / Defensive Ops:	31 Aug-8 Sep 00
– Pacifica D-Day / Offensive Ops:	9-10 Sep 00
– Pacifica Live-fly and Sim (12-hour ops):	11-14 Sep 00
– J EFX 00 Debrief:	15 Sep 00

Slide 15

Upcoming Exercises



- **RSOI, Korea**
- **Prairie Warrior, Ft Leavenworth, KS**
- **Union Flash, WPC (Limited use)**
- **Roving Sands, Ft Bliss, TX**
- **Ulchi Focus Lens, Korea**
- **Joint Expeditionary Forces Experiment, Hurlburt, FL**
- **Blue Flag, Hurlburt, FL**
- **Internal Look, JTASC**